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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/544,233

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Takanori Okada

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EXAMINER

CHOI, MICHAEL P

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2621

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/544,233	Applicant(s) OKADA ET AL.	
	Examiner Michael Choi	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 August 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1-9 are rejected under 35 U.S.C. 102(a) as being anticipated by Itoh (US 2005/0013583 A1)

Regarding Claim 1, Itoh teaches a recording/reproduction device for an information recording medium on which video data and audio data are recorded independently of each other (Fig. 1),

- wherein on the information recording medium, in a separate area from a main sequence in which data blocks including original audio data and video data are recorded in succession (Fig. 5 – MPEG transport stream having VOBs), an additional sequence in which data blocks including post-record audio data are recorded in succession is formed (Fig. 26 and 31),
- the recording/reproduction device comprising:
 - a pick-up for recording or reproducing information onto/from the information recording medium (Fig. 1, 130 and 131—pickup and medium), and
 - a control portion for controlling an operation of the pick-up (Fig. 1, 161-163 and 14),
 - wherein during reproduction from the information recording medium, the control portion controls an operation of the pick-up in such a manner that the pick-up

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accesses the main sequence and the additional sequence alternately and reproduces successive M (M is an integer of 2 or larger) data blocks in every access to each of the main sequence and the additional sequence (Figs. 26 and 31; Paragraphs 109, 112, 138-142).

Regarding Claim 2, Itoh teaches the recording/reproduction device according to claim 1, wherein the control portion controls an operation of the pick-up (Fig. 1, 130 and 131) in such a manner that between audio data and video data corresponding to each other in a same real-time, the audio data is recorded before the video data (Paragraph 145).

Regarding Claim 3, Itoh teaches the recording/reproduction device according to claim 2, wherein the control portion controls an operation of the optical pick-up in such a manner that when M data blocks corresponding to each other in a same real-time are read out from each of the main sequence and the additional sequence (in at least Figs. 30A, 30B and 39),

- (1) original audio data is reproduced from a head block of the M data blocks in the main sequence (Fig. 28; Paragraph 200),
- (2) post-record audio data is reproduced in succession from the M data blocks in the additional sequence, corresponding to the M data blocks in the main sequence (Paragraphs 188, 200, 218),
- (3) video data is reproduced from the head block of the main sequence (in at least Figs. 26, 27, 28 and 31), and
- (4) original audio data and video data are reproduced from (M-1) data blocks in the main sequence (Fig. 28; Paragraph 145).

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Regarding Claim 4, Itoh teaches the recording/reproduction device according to claim 1, wherein when a total amount of video data that is read out from (M+1) data blocks is taken as YV (Figs. 22, 23, 28, 29, 30A and 30B),

- a bit rate of the video data is taken as VdV (Fig. 29 – reading of V over time),
- a time necessary for reading out the video data from the (M+1) data blocks is taken as Tsv (Fig. 29 – time of reading V), and
- a process time that is necessary for processes other than reading out of the video data during a period between a time when reading out of the video data from the first data block is started and a time when reading out of the video data from the (M+1)-th data block is ended in the (M+1) data blocks is taken as Tnv, $YV/VdV \cdot Tsv + Tnv$ is satisfied (Figs. 28 and 29; Paragraphs 116-119, 123-127, 142, 188).

Regarding Claim 5, Itoh teaches a recording/reproduction device that records video data and audio data independently of each other onto an information recording medium (Fig. 1),

- wherein on the information recording medium, in a separate area from a first area in which data blocks including original audio data and video data are to be recorded (Fig. 5 – MPEG transport stream having VOBs), a second area in which data blocks including post-record audio data are to be recorded is provided (Fig. 26 and 31),
- the recording/reproduction device comprising:
 - a pick-up for recording or reproducing information onto/from the information recording medium (Fig. 1, 130 and 131—pickup and medium), and
 - a control portion for controlling an operation of the pick-up (Fig. 1, 161-163 and 14),

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- wherein when post-record audio data is recorded onto the information recording medium on which original audio data and video data are recorded, the control portion controls an operation of the pick-up in such a manner that successive M (M is an integer of 2 or larger) data blocks are reproduced from the first area, and then M data blocks including post-record audio data corresponding to the M data blocks are recorded into the second area in succession (Figs. 26 and 31; Paragraphs 109, 112, 138-142).

Regarding Claim 6, Itoh teaches the recording/reproduction device according to claim 5, wherein when original audio data and video data are recorded in the first area, the control portion controls the pick-up (Fig. 1, 130 and 131) in such a manner that the video data and the audio data are recorded alternately with a space within a range of fine seek of the pick-up (Paragraph 145).

Regarding Claim 7, Itoh teaches the recording/reproduction device according to claim 5, further comprising:

- a video reproduction buffer for accumulating video data that is read out from the information recording medium (Figs. 1, 164; and 7 – buffer memory for video),
- an audio reproduction buffer for accumulating audio data that is read out from the information recording medium (Figs. 1, 164; and 7– buffer memory for audio),
- a recording buffer for temporarily storing the post-record audio data before it is recorded (Fig. 1, 164 and Fig. 11, 172),
- a video decoder for decoding video data (in at least Fig. 1, 101),
- an audio decoder for decoding audio data (in at least Fig. 1, 101), and

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- an encoder for encoding audio data, wherein the value of M is within a range in which during the M data blocks are reproduced from the first area in succession, neither of the video reproduction buffer, the audio reproduction buffer, and the recording buffer overflows or underflows, and transfer of video data to the video decoder does not stop (in at least Figs. 22, 23, 29, 32-35, 38).

Regarding Claim 8, Itoh teaches the recording/reproduction device according to claim 7, wherein when:

- Tf(j) an access time from an ending edge of a video data recording area to a starting edge of an audio data recording area for post-record editing, after the video data is reproduced (Paragraphs 115-117; Figs. 22, 23, 24, 29, 32),
 - Vt: a data rate when data is read out from the information recording medium (in at least Figs. 22, 23, 24, 29, 32 – reading of V over time),
 - Tl: a time necessary for reproducing data that is recorded in a video data recording area (in at least Figs. 22, 23, 24, 29, 32 – time for reproduction),
 - VdV: a bit rate of video data (in at least Figs. 22, 23, 24, 29, 32 – bit rate of V),
 - N: a number of audio channels (Fig. 1 - having one audio input; Figs. 8, 10, 22, 23, 24, 29, 32),
 - VdA: a bit rate of audio data (in at least Figs. 22, 23, 24, 29, 32 – audio bit rate), and
 - Tfv: an access time from an ending edge of an audio data recording area to a starting edge of a next audio data recording area, the value of M satisfies
- $$M \geq \text{toreq.} \left(\frac{Tf(j) \cdot \text{times.} Vt}{(Tl \cdot \text{times.} (Vt - VdV - 2 \cdot \text{times.} N \cdot \text{times.} VdA) - Tfv \cdot \text{time} - s \cdot Vt)} \right)$$
- (Paragraphs 115-117 and 126-131; Figs. 22, 23, 24, 29, 32).

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Regarding Claim 9, Itoh teaches the recording/reproduction device according to claim 7, wherein the audio data has a plurality of channels, and wherein the recording/reproduction device comprises a plurality of audio decoders in accordance with the plurality of channels (Fig. 1 - having one audio input with associated decoder, 103; Figs. 8, 10, 22, 23, 24, 29, 32).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Choi whose telephone number is (571) 272-9594. The examiner can normally be reached on Monday - Friday 9:00AM - 5:30PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Marsha D. Banks-Harold/
Supervisory Patent Examiner, Art Unit 2621

/Michael Choi/
Examiner, Art Unit 2621